

Area of a Circle

A circular bucket has a radius of 6 in. Find the area of the bottom of the bucket. The formula for finding the area of a circle is $A = \pi r^2$.

One WayUse 3.14 for π .

$$\begin{aligned} A &= \pi r^2 \\ &= 3.14 \times 6^2 \\ &= 3.14 \times 36 \\ &= 113.04 \text{ in}^2 \end{aligned}$$

Another WayUse $\frac{22}{7}$ for π .

$$\begin{aligned} A &= \pi r^2 \\ &= \frac{22}{7} \times 6^2 \\ &= \frac{22}{7} \times 36 \\ &= \frac{22}{7} \times \frac{36}{1} \\ &= \frac{792}{7} \\ &= 113.14 \text{ in}^2 \end{aligned}$$

With a Calculator

Press: π \times **6** x^2 $=$

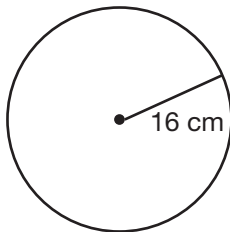
Display: **113.09734**

The bucket's area is about 113 in².

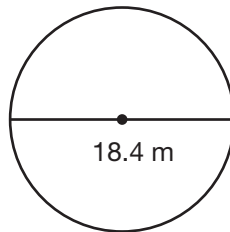
Find the area of each circle to the nearest whole number.

Use 3.14 or $\frac{22}{7}$ for π .

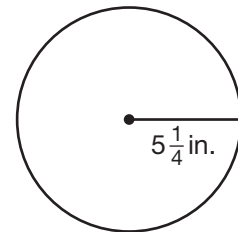
1.



2.



3.



4. $r = 9$ yd _____ 5. $d = 20$ m _____

6. $r = 14$ cm _____ 7. $d = 2.4$ ft _____

8. $r = 22$ cm _____ 9. $d = 8.8$ m _____

10. $d = 32$ cm _____ 11. $r = 5.3$ m _____

12. **Reasoning** If the circumference of a circle is 18π , what is the area of the circle?
